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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,807	09/06/2006	Etienne Chapelain	8952-000013/US/NP	4730
27572	7590	02/02/2010		
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER YABUT, DANIEL D	
			ART UNIT 3656	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,807	Applicant(s) CHAPELAIN ET AL.	
	Examiner DANIEL YABUT	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 8, 10, 11, 14-19, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Konig, German Patent DE 39040391 C1 in view of Danly et al., US Patent 2,565,759.

Konig discloses a steering wheel arrangement (Fig. 1) comprising a(n):

- *Re Claim 1*
- Fixed element (16), the fixed element carrying a first annular bearing (14), the annular bearing supporting a steering wheel (1) for rotation relative to the fixed element, the fixed element also carrying a second bearing (20'), the second bearing rotatably supporting a component (near 9) to be connected to part of the steering column (near 4) of a vehicle

However, as to **claim 1**, Konig does not expressly disclose the bearings both being retained to the fixed element by a first resilient retaining element, the first bearing being retained to the steering wheel by a second resilient retaining element, the first retaining element being resilient.

Danly et al. teaches the use of bearings (18, 40) both being retained to a fixed element (10) by a first retaining element (76), the first bearing being retained to a wheel (20) by a second

Art Unit: 3656

retaining element (48), the first retaining element being resilient, for the purpose of maintaining the bearings in place (C3 / L6-7).

Regarding claim 1, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide bearings both being retained to the fixed element by a first resilient retaining element, the first bearing being retained to the steering wheel by a second resilient retaining element, the first retaining element being resilient, as taught by Danly et al., in the device of Konig for the purpose of maintaining the bearings in place.

Konig as modified above further discloses the following:

Re claim 8

- First resilient retaining element further includes a(n):
 - First section overlying a portion of the first and second bearings for retaining the first and second bearings to the fixed element (see near numeral 76; Danly et al.)
 - Second section interconnected with the first section and overlying a portion of the first and second bearings for retaining the first and second bearings to the fixed element (see near numeral 78; Danly et al.)

Re claim 10

- Center of rotation of the steering wheel (2) is offset from the center of rotation of the steering column (17)

Re claim 11

- Fixed element carrying a first annular bearing (14) and a second annular bearing (20'), wherein the first bearing supports a steering wheel (1) for rotation relative to the fixed

Art Unit: 3656

element and the second bearing supports a steering column (Fig. 1) for rotation relative to the fixed element

- First retaining element having a first section (near 76; Danly et al.) and a second section (near 78; Danly et al.), wherein the first section retains the first and second bearings to the fixed element at a first height (near 76; Danly et al.) and the second section retains the first and second bearings for retaining to the fixed element at a second height (near 78; Danly et al.), the first height being greater than the second height
- Second retaining element (48; Danly et al.) for retaining the first bearing to the steering wheel.

Re claim 14

- Second retaining element (near 47; Danly et al.) is secured to the steering wheel (Fig. 1)

Re claim 15

- Second retaining element further comprises a plurality of fixing studs (47; Danly et al.), the fixing studs passing through corresponding apertures (near 47; Danly et al.) formed in part of the steering wheel.

Re claim 16

- First and second bearings are coplanar (see at 14, 20) .

Re claim 17

- Second bearing is mounted within the bounds of the first bearing (see at 14, 20).

Re claim 18

- Fixed element (16) carrying a first annular bearing (14) and a second annular bearing (20'), wherein the first bearing supports a steering wheel (1) for rotation relative to the

Art Unit: 3656

fixed element and the second bearing supports a steering column (Fig. 1) for rotation relative to the fixed element, wherein the center of rotation of the steering wheel (2) is offset from the center of rotation of the steering column (17).

- First resilient retaining element having a first section (near 76; Danly et al.) and a second section (near 78; Danly et al.), wherein the first section retains about one-half of each of the first and second bearings to the fixed element and the second section retains another about one-half of each of the first and second bearings to the fixed element (see near 18, 40 in Danly et al.)
- Second retaining element for retaining the first bearing (near 18; Danly et al.) to the steering wheel.

Re claim 19

- Surface of the first bearing and a surface of the second bearing are coplanar (see at 14, 20')

Re claim 21

- Steering wheel (1)
- Fixed element (16) carrying a first bearing (14) and a second bearing (20'), the first bearing supporting the steering wheel for rotation relative to the fixed element, the second bearing rotatably supporting a component to be connected to part of a steering column of a vehicle (Fig. 1)
- Retaining element having a first portion (near 76; Danly et al.) retaining the first bearing to the fixed element and a second portion (near 78; Danly et al.) retaining the second bearing to the fixed element, the first portion resiliently coupled to the second portion.

3. **Claims 2-5, 9, 12, 13, 20 and 22-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Konig, German Patent DE 39040391 C1 in view of Danly et al., US Patent 2,565,759 as applied to claims 1, 7, 8, 10, 11, 14-19, and 21 above, and further in view of French Patent FR 2384157 A.

Konig as modified above discloses all the claim limitations, see above, further including a(n):

Re claim 2

- Fixed element has a housing part with an upper surface (near 15), the upper surface having at least two levels (near 15), the outer periphery of the upper surface defining a wall (at 15), the first bearing being mounted to that wall (at 14), the upper surface defining an opening (near 20') having a side wall, the second bearing being mounted to that side wall (at 20')
- First retaining element comprises a plate (at 76) which lies over the upper surface, the plate having a part which is in contact with part of the first bearing and with part of the second bearing (near 14, 20')

However, as to **claim 2**, Konig as modified above does not expressly disclose the plate having a part which is resiliently biased into contact.

FR2384157A teaches the use of a plate (7, 12) having a part (7) which is resiliently biased into contact with a bearing (2) for the purpose of providing sufficient elasticity to take up relatively large machining tolerances (see abstract).

Regarding **claim 2**, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide the plate having a part which is resiliently biased into

Art Unit: 3656

contact, as taught by FR2384157A, in the device of Konig as modified above for the purpose of providing sufficient elasticity to take up relatively large machining tolerances, thus promoting the reliability of the device.

Konig as modified above further discloses the following:

Re claim 3

- Plate has two arcuate sections (near 76, 78; Danly et al.) located to either side of an aperture (near 9), one arcuate section being provided with retaining studs (78) to secure the plate to the fixed element, the other arcuate section being resiliently connected to the first arcuate section and engaging both the first bearing and the second bearing.

Re claim 4

- First arcuate section engages both the first bearing and the second bearing (near 76, 78).

Re claim 5

- Arcuate sections are interconnected by two relatively narrow interconnecting bridges (near 76, 78; Danly et al.)

Re claim 9

- First and second sections of the first retaining element are resiliently biased into contact with the first and second bearings at an undersurface of the first retaining element (FR2384157A)

Re claim 12

- Fixed element further comprises an upper surface (near 16) having at least two levels of differing height (near 16), an outer periphery defining a wall (near 15), wherein the first bearing is mounted to the wall (at 14)

Art Unit: 3656

- Opening in the upper surface, wherein the second bearing is mounted to the opening (near 20)

Re claim 13

- First and second sections of the first retaining element are resiliently biased into contact with the first and second bearings at an undersurface of the first retaining element (FR2384157A).

Re claim 20

- First and second sections of the first retaining element are resiliently biased into contact with the first and second bearings at an under surface of the first retaining element (FR2384157A).

Re claim 22

- First portion of the retaining element is drawn against the fixed element to resiliently move the first portion relative to the second portion (FR2384157A).

Re claim 23

- First and second portions of the retaining element are arcuate and coupled by a pair of resilient necks (near 76, 78; Danly et al.)

Re claim 24

- First portion of the retaining element is secured with a pair of mounting studs (78)

4. **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Konig, German Patent DE 39040391 C1 in view of Danly et al., US Patent 2,565,759 as applied to claims 1, 7, 8, 10, 11, 14-19, and 21 above, and further in view of French Patent FR 2384157 A.

Art Unit: 3656

Konig as modified above discloses all of the claim limitations, see above, further including the following:

Re claim 6

- Second retaining element is of annular form (at 48; Danly et al.), the element engages the first bearing on which the steering wheel is mounted (at 48; Danly et al.), the second retaining element being secured to part of the steering wheel (1)

However, as to **claim 6**, Konig et al. as modified above does **not** expressly disclose the second retaining element carrying a plurality of radially inwardly directed resilient lugs.

Bair et al. teaches the use of a retaining element (130) carrying a plurality of radially inwardly directed resilient lugs (146) for the purpose of dampening vibration (C5 / L31-35), thus reducing undesirable noise or movement.

Regarding claim 6, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide the second retaining element carrying a plurality of radially inwardly directed resilient lugs, as taught by Bair et al., in the device of Konig as modified above as modified above for the purpose of dampening vibration, thus reducing undesirable noise or movement.

Konig as modified above further discloses the following:

Re claim 7

- Second retaining element is provided with a plurality of fixing studs (14) the fixing studs passing through corresponding apertures (at 3, 14) formed in part of the steering wheel.

Response to Arguments

Applicant's arguments with respect to **claims 1-24** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL YABUT whose telephone number is (571)270-5526. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:00 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard W. Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL YABUT/
Examiner, Art Unit 3656
1/27/2010

Application/Control Number: 10/591,807
Art Unit: 3656

Page 11

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Supervisory Patent Examiner, Art Unit 3656